

Appl. No. 10/050,395

Amdt. dated June 11, 2004

Reply to Office Action of December 31, 2003

Attorney Docket K-1709

**Amendments to the Specification:****Please replace paragraph [0023] with the following paragraph:**

[0023] According to a preferred embodiment of the invention, the device 10 comprises of a first member, such as the fine adjustment sleeve 16 shown, and a second member, such as the ~~course~~ coarse adjustment sleeve 18. The sleeves 16, 18 adjustably engage one another. The overall length of the adjustment device 10 can be varied by adjusting the sleeves 16, 18 relative to one another. The sleeves 16, 18 carry adjustment indicia to aid in making discrete adjustments in the length of the adjustment device 10. The sleeves 16, 18 can also be provided with a frictional surface, such as the knurled surface 14 shown, to aid in gripping the sleeves 16, 18 while adjusting the adjustment device 10.

**Please replace paragraph [0024] with the following paragraph:**

[0024] The adjustment device 10 preferably has a slip fit member 20 (shown in Figure 5) opposite or spaced apart from a threaded member 22 having a ~~course~~ coarse pitch thread (e.g., a 20 pitch thread). As shown in the drawings, the slip fit member 20 is located at one end of the adjustment device 10 and the threaded member 22 at an opposite end. As will become more apparent in the description that follows, the slip fit member 20 supports one end of the adjustment device relative to either the drill motor 116 (shown in Figures 14 and 15) or the work piece (not shown) and the threaded member 22 is threadably adjustable relative to a mating thread carried by the other one of either the drill motor 116 or the work piece. This adjustment permits a distance or spatial relation between the drill motor 116 and work piece to be varied.

**Please replace paragraph [0025] with the following paragraph:**

[0025] The slip-fit member 20 is preferably provided at a trailing end of the fine adjustment sleeve 16. The threaded member 22 is preferably provided at a leading end of the ~~course~~ coarse adjustment sleeve 18. A leading end of the fine adjustment sleeve 16 is threaded to engage a trailing end of the ~~course~~ coarse adjustment sleeve 18. The sleeves 16, 18 adjustably engage one another through this threaded engagement.

**Please replace paragraph [0026] with the following paragraph:**

[0026] The adjustment device 10 according to a preferred embodiment of the invention is also provided with adjustment clamps 24, 26. A ~~course~~ adjustment ~~claim~~ clamp 24 is provided for clamping the threaded member 22 of the adjustment device 10 in a fixed

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position against the mating thread and relative to either the drill motor 116 or the work piece, which will become more apparent in the description that follows. A fine adjustment clamp 26 is provided for clamping the sleeves 16, 18 in a fixed relation to one another.

**Please replace paragraph [0029] with the following paragraph:**

[0029] The elongate member 32 preferably carries ~~course~~ coarse adjustment indicia, such as the ~~course~~ coarse adjustment gradations 45, 45' shown in Figure 2. The enlarged member 34 preferably carries fine adjustment indicia, such as the fine adjustment gradations 46 shown on the chamfer 44. The gradations 45, 45' and 46 are adapted to align with indicators 92, 142 to permit discrete amounts of adjustment in the adjustment device 10, which will become more apparent in the description of the operation of the adjustment device, as set forth hereinbelow. As clearly shown in drawings, every fifth ~~course~~ coarse adjustment gradation 45' is distinguished from the other ~~course~~ coarse adjustment gradations 45 to aid the user in making precise adjustments.

**Please replace paragraph [0036] with the following paragraph:**

[0036] Now, with reference to Figures 9-13, the course adjustment sleeve 18 will be described in greater detail. As shown in Figures 9 and 10, the ~~course~~ coarse adjustment sleeve 18 comprises three portions. A first portion, which is located at a trailing end 80 of the ~~course~~ coarse adjustment sleeve 18, defines an externally threaded member 82. A second portion, opposite the first portion, at a leading end 84 of the ~~course~~ coarse adjustment sleeve 18, defines the ~~course~~ coarse adjustment clamp 24, described above. A third portion, intermediate the first and second portions, defines a detent member 88 having circumferentially spaced fine adjustment detents 90.

**Please replace paragraph [0037] with the following paragraph:**

[0037] The externally threaded member 82 of the ~~course~~ coarse adjustment sleeve 18 mates with the internally threaded portion 64 of the fine adjustment sleeve 16. Upon threading the sleeves 16, 18 together, the detent member 88 of the ~~course~~ coarse adjustment sleeve 18 is received within the non-threaded portion 62 of the fine adjustment sleeve 16. With the detent member 88 within the non-threaded portion 62, the balls 48 and preload springs 50 may be inserted in corresponding threaded bores 54, 54'. The setscrews 52 may be threaded into the bores 54, 54' to hold the balls 48 and springs 50 in the bores 54, 54'. In this assembled

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condition, the balls 48 and springs 50 are bounded between detent member 88 and the setscrews 52.

**Please replace paragraph [0042] with the following paragraph:**

[0042] Similar to the fine adjustment clamp 26 set forth above, the ~~course~~ coarse adjustment clamp 24 is defined by a cantilevered portion, generally indicated at 100, as clearly shown in Figures 9-12. The cantilevered portion 86 100 is bounded axially between the leading end 84 of the ~~course~~ coarse adjustment sleeve 18 and a radially extending slot 102 (shown in Figure 10) and radially by an axially extending slot 104 (shown in Figures 10-12). A counter bore 106 is provided in the cantilevered portion 86 100. The counter bore 106 extends perpendicular relative to the axial slot 104. The counter bore 106 aligns with a threaded bore 108 in the ~~course~~ coarse adjustment clamp 24, opposite the axial slot 104. A locking screw 110, such as the cap screw shown in Figure 1, is inserted through the counter bore 106 and threaded into the threaded bore 108. Upon tightening the locking screw 110, the cantilevered portion 86 100 is drawn towards a non-cantilevered portion 112 of the ~~course~~ coarse adjustment clamp 24, thus engaging the clamp 24.

**Please replace paragraph [0047] with the following paragraph:**

[0047] The adjustment device 10 is adapted to fit on the drill motor 116 between two reference points, namely, the spindle 120 and the collet foot 124. In a preferred embodiment of the invention, a reduced diameter portion 134 at the leading end of the spindle housing 132 fits within the slip fit member 20 of the fine adjustment sleeve 16. A threaded portion 140 of the spindle housing 132 extending from the collet foot 124 threadably engages the threaded member 22 at the leading end 84 of the ~~course~~ coarse adjustment sleeve 18.

**Please replace paragraph [0048] with the following paragraph:**

[0048] The depth at which a hole is drilled is determined by the adjustment device 10. Upon operating the drill motor 116, the drill 118 is advanced through the adjustment device 10 to drill a hole into a work piece. The depth of the hole is determined by the adjustment device 10. To set up the adjustment device 10, a test hole is drilled and its depth is measured. If the depth of the hole exceeds .001 inch (.00254 cm) the desired depth, the user should make a ~~course~~ coarse adjustment.

**Please replace paragraph [0049] with the following paragraph:**

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[0049] To make a course coarse adjustment, the user loosens the locking screw 110 of the course coarse adjustment sleeve 18 and then turns the course coarse adjustment sleeve 18 in either a clockwise or counterclockwise direction to either increase or decrease the travel of the drill 118 into the work piece. Upon turning the course coarse adjustment sleeve 18, the threaded member 22 of the course coarse adjustment sleeve 18 travels along threaded spindle housing 140 while the spindle 120, or a portion thereof, slips in the slip fit member 20 of the fine adjustment sleeve 16. It should be noted that the entire adjustment device 10 moves axially.

**Please replace paragraph [0050] with the following paragraph:**

[0050] The spindle dust cover 132 of the drill motor 116 has a course coarse adjustment indicator 142 that is adapted to align with the course coarse adjustment gradations 45, 45'. Each gradation 45, 45' represents an incremental adjustment, such as .001 inches (.00254 cm), in the travel of the drill 118. This incremental representation permits the user to make discrete course coarse adjustments. Once a course coarse adjustment is made, the locking screw 110 is tightened to lock the course coarse adjustment sleeve 18 in place. The user can now drill another hole in the work piece and measure the depth of that hole. If the depth of that hole still exceeds .001 inch, the user can make further course coarse adjustments until the depth of the hole is within .001 inch. The course coarse adjustment gradations 45, 45' permit the user to quickly adjust the depth of the hole within .001 inch with very few course coarse adjustments.

**Please replace paragraph [0051] with the following paragraph:**

[0051] After making the necessary course coarse adjustments, the user can make any necessary fine adjustments. This is accomplished by loosening the locking screw 76 of the fine adjustment sleeve 16 and rotating the sleeve 16. The fine adjustment indicator 92 on the course coarse adjustment sleeve 18 is adapted to align with the fine adjustment gradations 46 on the fine adjustment sleeve 16. Each fine gradation 46 represents an incremental adjustment, such as .00035 inches (.000889 cm), in the travel of the drill 118.